

## SECTION 901 ASPHALT CONCRETE CRACK MASTIC

### 901.1 GENERAL:

This work consists of repairing cracks or joints over 1½ inches wide in asphalt concrete pavement with a specified sealant material without milling or routing.

### 901.2 MATERIALS:

**901.2.1 Binder:** Asphalt repair mastic shall be composed of quality-selected asphalt and/or resin select aggregates with structural integrity, synthetic rubber polymers antioxidants, naturally occurring and man-made reinforcing material, and other modifiers.

Asphalt repair mastic shall have the following properties:

PROPERTIES OF MASTIC BINDER	TEST METHOD	SPECIFICATION
Penetration @ 77°F (25°C), 150 g, 5 sec	ASTM D5329	100 dmm Max
Penetration @ 122°F (50°C), 150 g, 5 sec	ASTM D5329	150 dmm Max
Ductility @ 77°F (25°C), 5cm Min	ASTM D 113	20 cm Min
Softening Point (R&B)	ASTM D36	190°F (88°C) Min
Pliability @ 0°F (-18°C), 1" mandrel, 90° bend, 2 sec	ASTM D3111 Modified*	Bend With No Cracks
Resilience @ 77°F (25°C)	ASTM D5329	45% Min
Recommended Application Temp		380-400°F(193-204°C)***
Safe Heating Temp		400°F(204°C) Max****
PROPERTIES OF BLENDED MASTIC PRODUCT		
Low Temperature Flexibility @ 32°F(0°C) 1" mandrel, 90° bend, 10 sec	ASTM D3111 Modified*	Bend Without Breaking
Weight per Cubic Foot (Cubic Meter)		108-112 pounds (49-51 kilograms)

\* 1" (25mm) wide x 7" (175mm) long x 0.5" (12mm) thick sample

\*\* 2" (50mm) wide x 6" (150mm) long x 0.25" (8mm) thick sample conditioned for 24 hours

\*\*\* Temperature of the product measured at the pavement surface. Use maximum application temperature in cool weather

\*\*\*\* Prolonged heating at or above Maximum Safe Heating Temperature may severely damage product

**901.2.2 Aggregate:** The aggregate in the surfacing material shall have a LA abrasion loss of no more than 35 percent per AASHTO T96, Grading D.

### 901.2 PREPARATION:

The cracks to be repaired shall be clean, dry and intact. The pavement surface condition for application shall be the same level of cleanliness as typically used for hot-applied pavement crack and joint sealants. Air blowing, heat lancing, wire brushing etc. cleaning procedures can be used. Backpack blowers will not be allowed.

If a crack is exposed to precipitation, it shall be cleaned and dried before surfacing material is applied.

#### **901.4 APPLICATION:**

Ambient temperature during application shall be a minimum of 40°F and rising. The work area may be lightly heated with a hand torch or heat lance prior to installation to enhance adhesion.

The heated repair mastic shall be dispensed onto the properly prepared repair area, in layers if needed, leveled and smoothed with the surrounding pavement surface to form a durable repair.

Improperly installed surfacing material shall be removed and reinstalled at no additional cost to the Owner.

#### **901.5 EQUIPMENT:**

The repair mastic shall be heated in a thermostatically controlled mastic mixer that utilizes oil as a heat transfer medium and has a full sweep horizontal agitator capable of gently lifting the material from the bottom of the reservoir and turning the material over and over. The agitation shall be capable of mixing and suspending materials, filled with aggregates having a specific gravity as high as 3.0.

#### **901.6 MAINTENANCE OF TRAFFIC:**

The Contractor is responsible for coordinating with the facilities manager at the site to properly control traffic and to prevent traffic from traveling in the freshly applied materials. The repaired areas shall be kept barricaded until the sealant has cooled enough to support traffic per manufacturer's recommendation or a minimum of 2 hours whichever is more stringent.

#### **901.7 TRAINING:**

A representative of the material manufacturer must be on site the first day of material application for training of the repair crews.

#### **901.8 LIABILITY FOR DAMAGE:**

Damage to vehicles or private property from the mastic shall be the Contractor's responsibility.

#### **901.9 MEASUREMENT:**

No measurement will be made for cracks repair in designated lots as shown on the plans.

#### **901.10 PAYMENT:**

Payment for crack mastic will be paid for on a lump sum basis for the pavements included on the project plans. For any additional crack mastic required and approved outside of these shown on the plans will be paid for by the lineal foot.